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FINAL INVESTIGATION DERIVED WASTE MANAGEMENT PLAN NAS FORT WORTH TX
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HYDROGEOLOGIC

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NAVAL AIR STATION FORT WORTH JRB CARSWELL FIELD TEXAS

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 497

HYDRO GeoLogic INC.

FINAL
INSTALLATION RESTORATION PROGRAM
RCRA FACILITY INVESTIGATION

INVESTIGATION-DERIVED WASTE MANAGEMENT PLAN
NAS FORT WORTH JRB, TEXAS

Prepared for
Air Force Center for Environmental Excellence
Brooks AFB, Texas

Contract No. F41624-95-D-8005

May 1999

HydroGeoLogic, Inc.
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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE
BROOKS AIR FORCE BASE TEXAS

1 June, 1999

MEMORANDUM FOR TIM SEWELL (TNRCC)

FROM: Michael Dodyk
AFCEE/ERD
P.O. BOX 27008
FT WORTH, TX 76127-0008

SUBJECT: Final Investigation-Derived Waste Management Plan
NAS Fort Worth JRB, Texas
TNRCC Owner Acct. No. 4532, Facility ID #0009696

Dear Mr. Sewell;

Please find enclosed one copy of the Final Investigation-Derived Waste (IDW) Management Plan for RCRA Facility Investigations conducted as part of the Installation Restoration Program at NAS Fort Worth JRB, Texas. This plan details the procedures and requirements for proper management and disposal of IDW generated during RFI field efforts at NAS Fort Worth JRB. 497.3

If you have any questions, please contact me at 817-732-9734.

Sincerely,

Michael R Dodyk

MICHAEL R DODYK, P.E.
Restoration Team Chief
DERA Restoration Division

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Brooks AFB, TX 78325

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RCRA FACILITY INVESTIGATION

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This document presents the plan for management of investigation-derived waste at NAS Fort Worth JRB, Texas.

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AFB	Air Force Base
AFCEE	Air Force Center for Environmental Excellence
AST	aboveground storage tank
BFI	Browning Ferris Industries
BTEX	benzene, toluene, ethylbenzene, xylene
CFR	Code of Federal Regulations
COR	Contracting Officer's Representative
DOT	Department of Transportation
EBS	Basewide Environmental Baseline Survey
EPA	Environmental Protection Agency
IDW	investigation-derived waste
LAW	Law Environmental, Inc.
MW	Municipal Waste
PCB	polychlorinated biphenyl
POTW	publicly owned treatment works
ppm	parts per million
PST	petroleum storage tank
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
SVOC	semi-volatile organic compound
TAC	Texas Administrative Code
TC	toxicity characteristic
TCE	trichloroethylene
TCLP	Toxicity Characteristic Leaching Procedure
TNRCC	Texas Natural Resource Conservation Commission
TPH	total petroleum hydrocarbons
TSDF	Treatment Storage and Disposal Facility
UST	underground storage tank
VOC	volatile organic compounds

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FINAL
INSTALLATION RESTORATION PROGRAM
RCRA FACILITY INVESTIGATION
INVESTIGATION-DERIVED WASTE
MANAGEMENT PLAN

1.0 INTRODUCTION

HydroGeoLogic, Inc. (HydroGeoLogic) has prepared this Investigation-Derived Waste (IDW) Management Plan to support the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) activities at Naval Air Station (NAS) Fort Worth Joint Reserve Base (JRB) in Fort Worth, Texas. This IDW Management Plan is applicable to RFI work being performed by HydroGeoLogic for the Air Force Center for Environmental Excellence (AFCEE) under Contract No. F41624-95-D-8005.

Four categories of waste requiring management are anticipated during RFI activities: (1) soil cuttings from test borings and borings drilled for monitoring well installation; (2) development and purge water from monitoring well installation and sampling activities; (3) decontamination fluids resulting from steam cleaning of heavy equipment and from decontamination of sampling equipment; and (4) miscellaneous waste, consisting of empty drums, used personal protective clothing, and general trash.

HydroGeoLogic does not accept title to any solid or hazardous wastes generated during RFI activities at NAS Fort Worth JRB. However, HydroGeoLogic will coordinate and provide support to AFCEE in all aspects of the disposal process.

This IDW Management Plan outlines the applicable State and Federal regulatory requirements, waste classification criteria, a waste management approach for each waste type, waste characterization, and an explanation of disposal details for the labeling, staging, and disposal of wastes.

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2.0 REGULATORY REQUIREMENTS

IDW is subject to the same regulations as all other waste. NAS Fort Worth JRB must be in compliance with state regulations in addition to federal regulations since Texas is authorized to administer through the Texas Natural Resource Conservation Commission (TNRCC) essentially all applicable RCRA regulations. Currently, the only major exceptions are the regulations governing newly identified wastes and the land ban requirements governing toxicity characteristic (TC) waste.

The primary federal regulations governing IDW generated at NAS Fort Worth JRB are Title 40 of the Code of Federal Regulations (CFR) Parts 261, 262, 266, and 268. The primary state regulations are found in Title 30 of the Texas Administrative Code (TAC), Chapter 335, Subchapter C and Subchapter R, and Chapter 334. The State of Texas references the federal regulations for hazardous waste classification and management.

NAS Fort Worth JRB is presently classified as an industrial waste generator. There are five categories of industrial waste which are of concern at NAS Fort Worth JRB:

- Hazardous waste;
- Nonhazardous industrial waste;
- Nonhazardous industrial waste that exceeds Texas action levels;
- Special wastes such as petroleum-contaminated waste not governed by petroleum storage tank (PST) regulations and empty drums; and
- Petroleum-contaminated waste regulated under PST requirements.

Hazardous waste is frequently referred to as RCRA hazardous or Subtitle C waste. Nonhazardous industrial waste is often referred to as Class 2 waste. Nonhazardous industrial waste that exceeds the Texas action levels is designated Class 1 waste. A checklist that will be used as a guideline for classifying municipal hazardous waste and industrial waste is included as Attachment A.

2.1 HAZARDOUS WASTE

A waste is classified as hazardous if it possesses a hazardous characteristic or if it is specifically identified on a list as a hazardous waste (40 CFR Part 261). It is up to the generator to determine if the waste is hazardous based on laboratory analyses and/or generator knowledge. Laboratory data may be recent or historical. Generator knowledge assumes an understanding of the history of the waste, the point of generation of the waste, and the processes involved or not involved in generation of the waste. Included as Attachment B is Table F-1 from the *Basewide Environmental Baseline Survey* which was prepared by the Air Force in 1993 as part of base closure activities. This table identifies some of the hazardous wastes that have been generated at NAS Fort Worth JRB. If changes occur in the current understanding of the hazardous wastes generated or stored at RFI sites included in the subject delivery orders, then an updated table will be provided as necessary.

2.1.1 Characteristic Hazardous Waste

There are four categories of characteristically hazardous waste: ignitable, reactive, corrosive, and toxic. The characteristic of toxicity refers to waste which is hazardous because of the presence of specific organic and inorganic compounds at concentrations above regulatory limits. Table 2.1 presents the TC compounds and their corresponding limits.

Laboratory testing for the characteristic of toxicity is a two-step process. The sample is first subjected to a leaching procedure called the Toxicity Characteristic Leaching Procedure (TCLP). The sample extract is then run through the applicable EPA SW-846 method for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, and metals. Liquid samples with less than 5 percent solids content are analyzed without the TCLP step. Use of the TCLP step for non-liquids involves a 20-fold dilution of the original sample concentration. For this reason, generators often omit the TCLP step and run the EPA SW-846 method directly and then divide the final concentration by 20 for soil and sediment samples (see Table 2.1). This results in an overly conservative number with respect to the TC because it assumes that 100 percent of the contaminant is extracted from the sample when in reality it is less than 100 percent due to various factors.

If the final result is less than the TC regulatory threshold values presented in Table 2.1, the waste is not considered hazardous. If the waste is above the threshold, it is considered characteristically hazardous. If the waste is TC hazardous based on the "totals" correlation, the generator may decide to retest the waste.

2.1.2 Listed Hazardous Waste

Waste which is listed hazardous waste is specifically identified on one of the lists in 40 CFR Part 261. Commonly listed wastes include F001 and F002 which refer to spent halogenated solvents, and F003 and F005 which refer to spent nonhalogenated solvents. F001, F002, and F005 wastes refer to solvents which contained 10 percent or more of one of the listed constituents prior to use. (The concentration of the solvent in the final listed waste is irrelevant.) The concentration of F003 wastes on the other hand refers to solvents which contain "only the ... spent solvent" (e.g., technical grade acetone or xylene).

Listed wastes are also governed by an Environmental Protection Agency (EPA) policy known as the "Mixture and Derived From" Rule (40 CFR 261.3). This rule states that 1) if a listed waste comes in contact with another waste the resulting mixture is considered listed waste; and 2) if a waste is derived from a listed waste, it is considered listed waste. This rule applies regardless of the concentration of the constituents of concern. However, mixtures of wastes which are listed because of a hazardous characteristic are not considered hazardous if the mixture no longer has the characteristic.

Another policy of significance is the "Contained-In" Policy (OSWER Permit Policy Compendium No. 9441.1991104). This rule states that a listed waste can be contained in an environmental media without considering the whole media as listed waste, e.g., contaminated soil, contaminated

Table 2.1 (continued)
TCLP and Total Regulatory Limits
IDW Management Plan
NAS Fort Worth JRB, Texas

TC Compound	TCLP Regulatory Limits (mg/L)	Equivalent Total Analysis Soil (mg/kg)
1,1-Dichloroethylene	0.7	14
Methyl ethyl ketone	200	4,000
Tetrachloroethylene	0.7	14
Trichloroethylene	0.5	10
Vinyl chloride	0.2	4
Chlordane	0.03	0.6
2,4-D	10.0	200
Endrin	0.02	0.4
Heptachlor and its epoxide	0.008	0.016
Lindane	0.4	8
Methoxychlor	10.0	200
Toxaphene	0.5	10
2,4,5- TP	1.0	20

groundwater. If the constituents for which the waste is listed can be shown to be completely removed or removed to such low levels as not to pose an unacceptable risk, the media will not be considered listed waste. Demonstrations are typically made at the regional EPA level or the state level. This contained-in policy is frequently applied to contaminated debris and groundwater treatment. It also applies to personal protective equipment.

Listed waste must be managed in accordance with 40 CFR Part 268 and is subject to the land ban restrictions. Wastes which are above the prescribed disposal threshold for the constituents for which the waste is listed must be treated to below the threshold prior to disposal in a RCRA Subtitle C unit. The threshold concentrations are listed in 40 CFR Part 268.43 and are based on "total" concentration, not TCLP concentrations. If the waste is below the threshold, it does not have to be treated prior to disposal.

2.1.3 Characteristic and Hazardous Waste Combination

Waste which is both listed and characteristically hazardous is governed by both sets of regulations. For example, a waste which is listed as F001 due to trichloroethylene (TCE), and TC hazardous because of TCE, must meet the universal treatment standards for all compounds in 40 CFR Part 268.48 prior to disposal in addition to meeting the treatment standard for TCE.

Table 2.1
TCLP and Total Regulatory Limits
IDW Management Plan
NAS Fort Worth JRB, Texas

TC Compound	TCLP Regulatory Limits (mg/L)	Equivalent Total Analysis Soil (mg/kg)
Arsenic	5.0	100
Barium	100	2,000
Cadmium	1.0	20
Chromium	5.0	100
Lead	5.0	100
Mercury	0.2	4
Selenium	1.0	20
Silver	5.0	100
o-Cresol	200	4,000
m-Cresol	200	4,000
p-Cresol	200	4,000
Cresol	200	4,000
2,4-Dinitrotoluene	0.13	2.6
Hexachlorobenzene	0.13	2.6
Hexachloro-1,3-butadiene	0.5	10
Hexachlorethane	3.0	60
Nitrobenzene	2.0	40
Pentachlorophenol	100	2,000
Pyridine	5.0	100
2,4,6-Trichlorophenol	2.0	40
2,4,5-Trichlorophenol	400	8,000
Benzene	0.5	10
Carbon tetrachloride	0.5	10
Chlorobenzene	100	2,000
Chloroform	6.0	120
1,2-Dichloroethane	0.5	10

2.1.4 General Management and Disposal Requirements

Hazardous waste must be tested, labeled and stored according to the requirements of 40 CFR Parts 261 and 262, respectively. Waste profile forms, waste code approval forms, and waste manifest forms are required before a waste is sent off site for treatment, storage or disposal. All treatment, storage and disposal facilities (TSDFs) must be permitted facilities, subject to the requirements of RCRA Subtitle C. Transporters of hazardous waste must have an EPA Identification Number and be licensed to transport hazardous waste. Furthermore, all persons involved with any aspects of hazardous waste management will be properly trained.

Liquid wastes cannot be placed in a landfill; wastes which will not pass the paint filter test must be solidified prior to disposal. Hazardous liquid waste can be recycled, treated prior to disposal, disposed of in a landfill after solidification, or injected into a deep well. Hazardous liquids can also be sent to a wastewater treatment plant or publicly owned treatment works (POTW) that is governed by a NPDES permit, provided the facility is permitted to and agrees to accept the waste.

2.2 NONHAZARDOUS WASTE

With the exception of the municipal waste dumpsters, all NAS Fort Worth JRB nonhazardous waste is classified as industrial waste. Municipal waste is disposed of in a municipal landfill. Industrial waste is disposed of in a Class 1, 2, or 3 facility.

Class 1 waste refers to industrial nonhazardous waste which exceeds Texas action levels as defined in Section 335.505, Appendix 1 (Table 2.2) but is not hazardous by federal standards. Class 2 refers to nonhazardous waste which does not exceed Texas action levels and Class 3 refers to construction and debris waste. Class 1 waste can only be disposed in a Class 1 facility, Class 2 wastes can be disposed in a Class 1 or 2 facility and Class 3 can be disposed in a Class 1, 2, or 3 facility. Prior to waste disposal, a facility-specific waste profile form is submitted to the TSDF to assure its acceptance of the waste. A Waste Code Request Form (TNRCC Form 0757) (Attachment C) must also be submitted to TNRCC in order to obtain a TNRCC tracking number.

Liquid waste of any class may be sent to a permitted treatment facility or disposed in the landfill after solidification.

2.3 SPECIAL WASTES

Texas has a special waste category for eight specific categories of industrial wastes which are not hazardous. NAS Fort Worth JRB activities may generate wastes in three of the eight special industrial waste categories including:

- Petroleum-contaminated wastes not governed under Chapter 334 of 30 TAC (PST Regulations)
- Empty containers such as 55-gallon drums
- PCB-contaminated wastes

Table 2.2
EPA and Texas Action Levels for Waste Classification
IDW Management Plan
NAS Fort Worth JRB, Texas

Analytical Requirements				
EPA No.	Parameter	Reg. Level (mg/L)	Texas Class 1 Reg. Level (mg/L)	Texas Class 2 Reg. Level (mg/L)
Metals				
D004	Arsenic	5.0	1.8	less than 1.8
D005	Barium	100.0		
D006	Cadmium	1.0	0.5	less than 0.5
D007	Chromium	5.0		
D008	Lead	5.0	1.5	less than 1.5
D009	Mercury	0.2		
D010	Selenium	1.0		
D011	Silver	5.0		
Herbicide/Pesticide				
D020	Chlordane	0.03		
D016	2,4-D	10.0		
D012	Endrin	0.02		
D031	Heptachlor and its epoxide	0.008		
D013	Lindane	0.4	0.3	less than 0.3
D01401	Methoxychlor	10.0		
D015	Toxaphene	0.5	0.3	less than 0.3
D017	2,4,5-TP (Silvex)	1.0		
GC/MS (VOAs)				
D018	Benzene	0.5		
D019	Carbon tetrachloride	0.5		
D021	Chlorobenzene	100.0	70.0	less than 70.0
D022	Chloroform	6.0		
D027	1,4-Dichlorobenzene	7.5		
D028	1,2-Dichloroethane	0.5		
D029	1,1-Dichloroethylene	0.7	0.6	less than 0.6

Table 2.2 (continued)
EPA and Texas Action Levels for Waste Classification
IDW Management Plan
NAS Fort Worth JRB, Texas

Analytical Requirements				
EPA No.	Parameter	Reg. Level (mg/L)	Texas Class 1 Reg. Level (mg/L)	Texas Class 2 Reg. Level (mg/L)
D035	Methyl ethyl ketone	200.0		
D039	Tetrachloroethylene	0.7		
D040	Trichloroethylene	0.5		
D043	Vinyl chloride	0.2		
GC/MS Semi-Volatiles				
D023	*o*-Cresol	200.0		
D024	*m*-Cresol	200.0		
D025	*p*-Cresol	200.0		
D026	Cresol (total)	200.0		
D030	2,4-Dinitrotoluene	0.13		
D032	Hexachlorobenzene	0.13		
D033	Hexachlorobutadiene	0.5	0.4	less than 0.4
D034	Hexachloroethane	3.0		
D036	Nitrobenzene	2.0		
D037	Pentachlorophenol	100.0		
D038	Pyridine	5.0	4.0	less than 4.0
D041	2,4,5-Trichlorophenol	400.0		
D042	2,4,6-Trichlorophenol	2.0		

Note: The concentrations reported in this table are the maximum allowable leachable concentrations.

Petroleum-contaminated waste which exceeds 1,500 parts per million (ppm) total petroleum hydrocarbons (TPH) is considered Class 1 waste. IDW contaminated by a material containing greater than or equal to 50 ppm total PCBs and waste containing greater than or equal to 50 ppm PCBs are classified as Class 1. Empty containers which have held hazardous or Class 1 wastes are considered Class 1 unless they are demonstrated to be clean (30 TAC Part 335.508).

2.4 PETROLEUM-CONTAMINATED WASTE FROM UNDERGROUND STORAGE TANKS

Petroleum-contaminated waste generated from petroleum storage tank investigation and remediation are governed under Chapter 334 of Title 30 of the TAC which addresses leaks from PSTs. IDW from underground storage tank (UST) and above-ground storage tank (AST) sites at NAS Fort Worth JRB sites are expected to fall into this category.

Waste which is suspected of being contaminated with petroleum, or is generated as a result of a petroleum spill or PST investigation must be tested for TPH and benzene, toluene, ethylbenzene and xylene (BTEX). Any waste generated during activities regulated by Chapter 334 of TAC 30 is classified as a non-industrial special waste which is governed under Chapter 330 of TAC 30 (Municipal Solid Waste). A non-industrial special waste does not carry any specific class or division therefore, disposal requirements are dependant on the disposal facility permit.

3.0 WASTE TYPE AND MANAGEMENT

During RFI field work, various activities such as drilling boreholes, well installation, sampling events, and decontamination procedures will produce liquid and solid waste. This waste may contain contaminants that require treatment or special disposal.

Very little hazardous waste is expected to be generated as a result of investigation activities at NAS Fort Worth JRB because only relatively small amounts of hazardous materials were used as part of base operations and hazardous waste which was generated was managed in accordance with RCRA. Current documentation indicates that hazardous waste was collected and stored in designated storage areas, including satellite accumulation points, and treated or disposed of in accordance with state and federal USEPA/Department of Transportation (DOT) regulations.

Areas in which listed wastes have been generated in the past are identified in Attachment B. Investigations of these areas will generally include testing samples for VOCs, SVOCs, and metals. Absent any historical evidence documenting or suggesting a release to the environment, IDW from these areas will not be considered listed waste if constituents of concern are not present in the samples. If constituents of concern are present, a determination will be made on a site-specific basis as to the source of the contamination (i.e., it will not automatically be assumed to be a hazardous waste).

Samples of IDW from areas in which maintenance activities took place, or where pesticides were stored, or where petroleum products were used will be tested for the characteristic of toxicity for both metals and organics unless existing "totals" (VOC, SVOC, pesticide, and metal) data exists indicating such testing in unnecessary. "Total" analyses will be performed instead of TCLP. Areas which involved the use of acids or bases will be tested for pH.

Liquid waste that will typically be generated as a result of activities at NAS Fort Worth JRB consists of:

- Development and purge water from monitoring wells
- Decontamination water

Solid waste that will typically be generated consists of:

- Drilling cuttings
- Soil borings
- Miscellaneous waste

All IDW generated during RFIs at NAS Fort Worth JRB will be temporarily stored in a designated paved and secured staging area. The location of the IDW Staging Area is presented in Figure 3.1.

A general discussion concerning management of each type of waste is presented in this section. Figure 3.2 presents the steps involved in the selection of options. Waste sampling and analysis, labeling, storage, and disposal is presented in more detail in Section 4.0.

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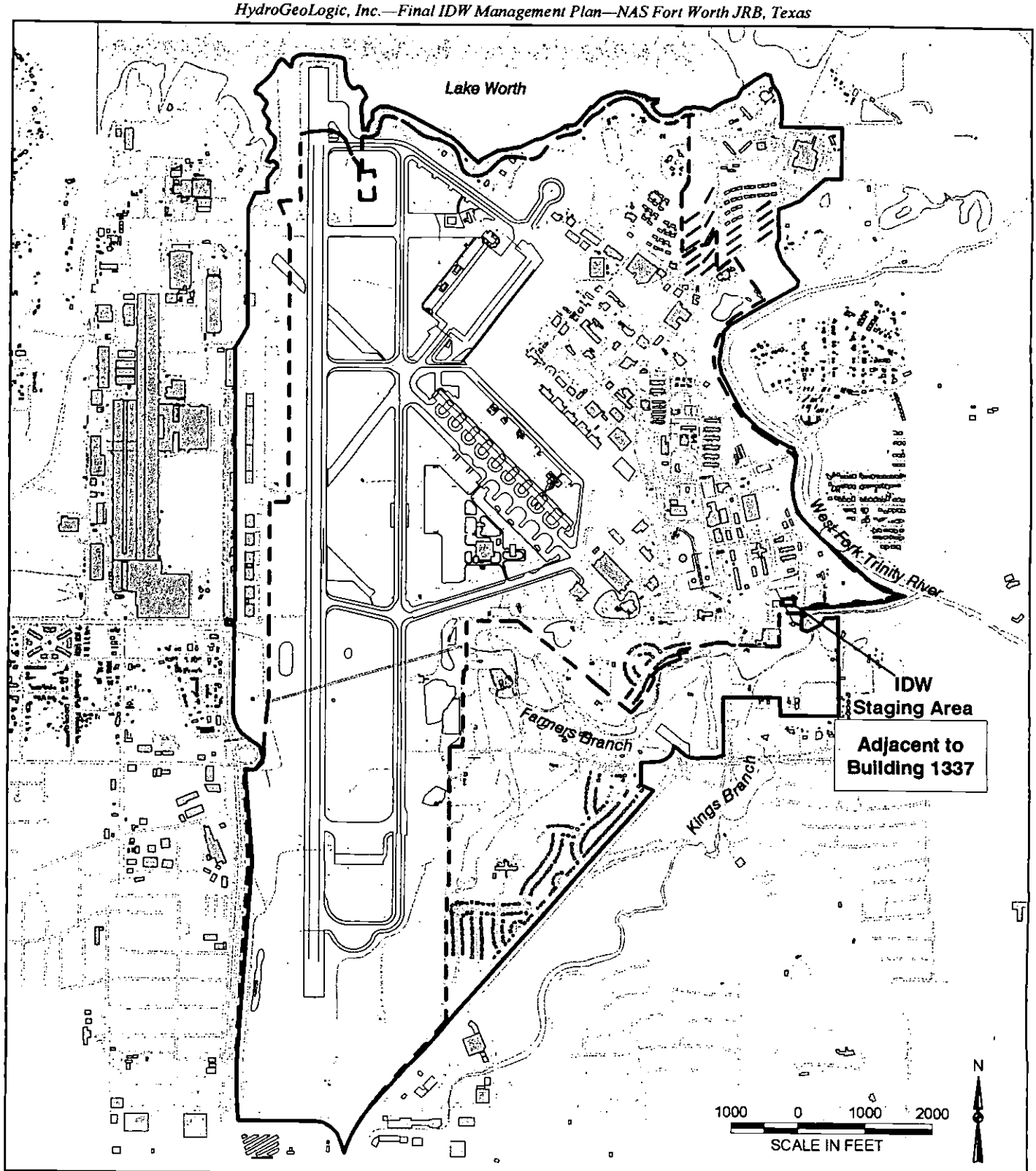

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Revised: 05/27/99 cf
Source: HGL ArcView Database

U.S. Air Force Center for Environmental Excellence
Brooks AFB, Texas

Legend

- Area of Concern (AOC)
- Building
- Solid Waste Management Units (SWMU)

Figure 3.1

IDW Staging Area
NAS Fort Worth JRB, Texas

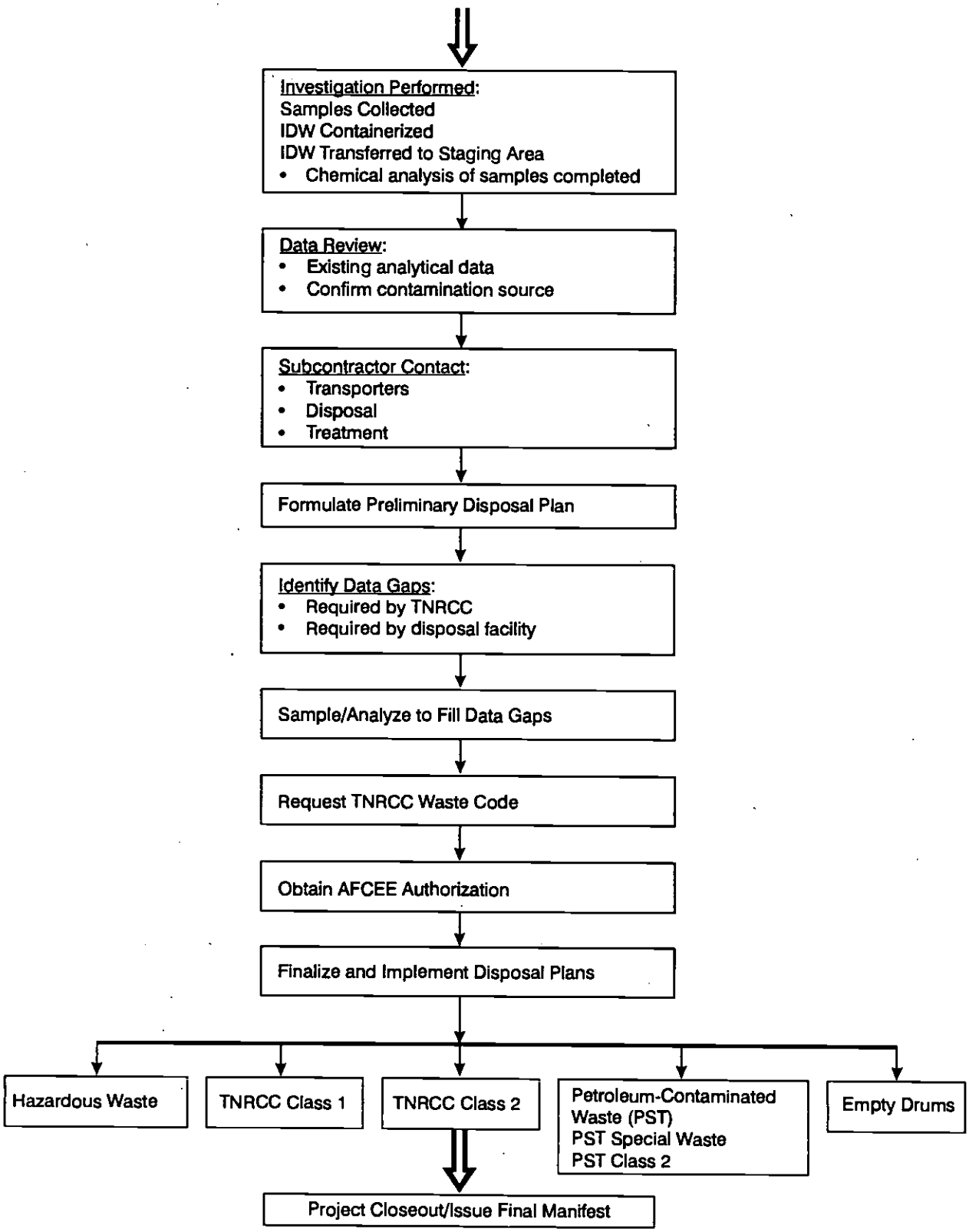

Figure 3.2 Disposal of Investigation-Derived Waste

3.1 DEVELOPMENT AND PURGE WATER

Development and purge water will be collected and containerized in DOT-approved 17H drums. The drums will be labeled, inventoried and transferred to the staging area designated by the AFCEE Contracting Officer's Representative (COR) at NAS Fort Worth JRB, pending waste disposal characterization (Figure 3.1). Nonhazardous waste water will be placed into a closed-top, commingled, water storage tank. The waste water will be sampled and the analytical results will be submitted to the Navy for review of compatibility with the chemical effluent limits set in their POTW discharge permit with the City of Fort Worth. Waste water with analytical results that meet Navy effluent limits will be discharged into the base sanitary sewer system. Waste water which does not meet Navy effluent limits will be bulked for transport to a permitted treatment facility. Hazardous waste water generated will be bulked for transport and disposed of at a Subtitle C - permitted facility.

Petroleum-contaminated water generated as a result of PST investigations may be sent to a permitted facility, if it is classified as PST Special Waste, or the City of Fort Worth POTW, if it is acceptable for discharge under the Navy's permit.

3.2 DECONTAMINATION WATER

The drilling rigs and drilling equipment will be decontaminated on a decontamination pad in the IDW staging area. The decontamination pad will be constructed of a bermed area lined with a 8-mil plastic liner or similar type material to prevent decontamination water run-off. Decontamination water will be collected and containerized in a closed-top water storage tank, labeled, inventoried, and disposed of to the POTW, or another appropriate facility.

The decontamination procedures specified in project work plans call for methanol and hexane to be used for cleaning field sampling equipment. This decontamination is conducted in an open top 5-gallon bucket allowing the hexane and methanol to volatilize. No hexane or methanol waste is expected to be generated as a result of sampling activities at the base.

3.3 DRILLING CUTTINGS AND SOIL BORINGS

Drilling cuttings and drilling fluids generated during drilling activities, and soils generated during sampling activities, will be collected and containerized in closed-top DOT-approved 17H drums. The drums will be labeled, inventoried, and transported to the staging area designated on Figure 3.1, pending waste disposal characterization.

Class 2 IDW will be requested to be disposed of on base. However, if TNRCC requires additional testing, this waste will be disposed of off base in a Class 2 landfill. Class 1 waste will be disposed of at Class 1 landfill.

Soils which are RCRA hazardous will be disposed of in accordance with RCRA Subtitle C requirements. If necessary, waste will be treated (e.g., incinerated, stabilized) prior to disposal

at a Subtitle C - permitted landfill. Petroleum-contaminated municipal waste (MW) soil from PST investigations will be managed according to TNRCC PST regulations.

3.4 MISCELLANEOUS WASTE

Miscellaneous waste such as used personal protective clothing (i.e., Tyvek coveralls, boot covers, gloves, respirator cartridges) and disposable supply containers, will be collected and containerized in double trash bags and placed in a designated trash dumpster at the completion of work each day. Hazardous miscellaneous waste is not expected to be generated given the limited amount of hazardous waste contamination that is anticipated.

Empty drums containing characteristically hazardous or Class 1 nonhazardous waste will be triple rinsed and reused if feasible. Once the drums cannot be reused, they will be (1) disposed of in a landfill as hazardous or Class 1 waste, (2) triple rinsed and disposed of as Class 2 waste, or (3) sent to a drum recycler, depending on the circumstances surrounding their disposal. (For example, if only a few drums are involved, it may be more feasible to send them to a drum recycler than to pay the minimum fee for landfill disposal.)

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4.0 IDW DISPOSAL DETAILS

This section presents details on how IDW is to be characterized and prepared for proper disposal including labeling, sampling and analyses, staging, and disposal procedures.

4.1 LABELING

Drums containing IDW will be identified with the site name, drum number, IDW waste type, company name, company phone number, and date generated, using a waterproof marker. Also included will be the specific location from which the MW was generated (e.g., monitoring well MW-14, soil boring SB-07). Figure 4.1 presents an example of a typical drum label. An IDW inventory sheet (Table 4.1) will be maintained by the HydroGeoLogic field operations manager to facilitate identification and tracking of IDW for appropriate disposal.

Containerized waste determined to be hazardous, based on the outcome of the characterization analysis (or generator knowledge), will be relabeled in a manner consistent with applicable state and federal requirements. Figure 4.2 provides an example of a suitable hazardous waste label. Waste determined to be contaminated with petroleum will be relabeled in a manner consistent with state requirements.

4.2 SAMPLING AND CHEMICAL ANALYSES

Whenever possible, generator knowledge or the results of soil or ground-water sampling will be used to select the appropriate disposal option for IDW; however, it may occasionally be necessary to collect additional samples for chemical analysis. In order to minimize costs, composite sampling methodology will be used when appropriate.

The chemical analyses that will be performed on the composite samples will be based on existing data and the data requirements of the treatment, storage, or disposal facility. When additional laboratory testing is necessary to determine whether constituents of concern are present in the IDW, the following test methods are likely to be performed.

- TCLP Volatile Organic Compounds-EPA Method 1311/8240
- Total Petroleum Hydrocarbons-TX 1005
- TCLP Metals EPA-Method 131 I/Series 200
- TCLP Pesticides and PCBs-EPA Method 1311/8080
- Ignitability-EPA Method 1010
- Total Volatile Organic Compounds-EPA Method 8260
- Total Semi-Volatile Organic Compounds-EPA Method 8270
- Total Metals (RCRA) EPA-Method Series 200
- Total Pesticides and PCBs-EPA Method 8080

Not all of these tests will be performed on each sample, depending on the requirements of the TSDF. If "total" analyses are run in lieu of TCLP analyses, a 1-to-1 correlation will be assumed for water samples and a 20-to-1 correlation will be used for soil and sediment samples (see Table 2.1).

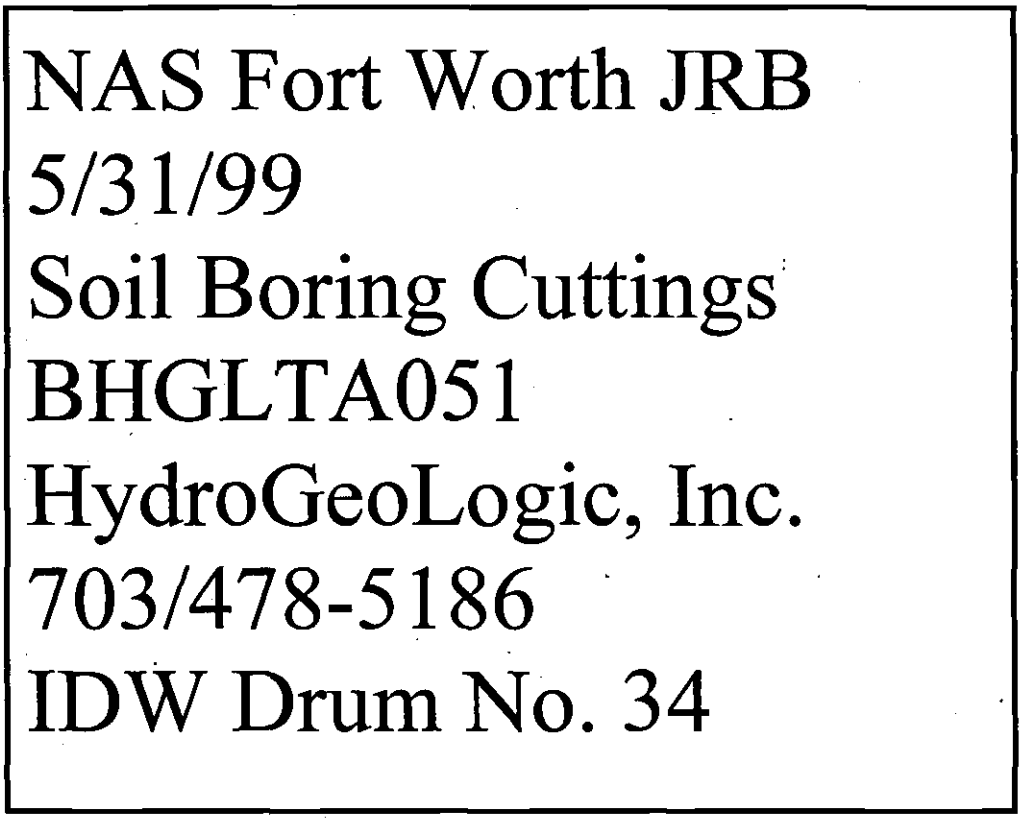

Figure 4.1 Example of Information Provided on a Typical Drum Label

Table 4.1
IDW Inventory Sheet
IDW Management Plan
NAS Fort Worth JRB, Texas

SWMU	MEDIA		VOLUME	HAZARDOUS WASTE CODE	ACCUM. DATE
	GROUNDWATER	SOIL			

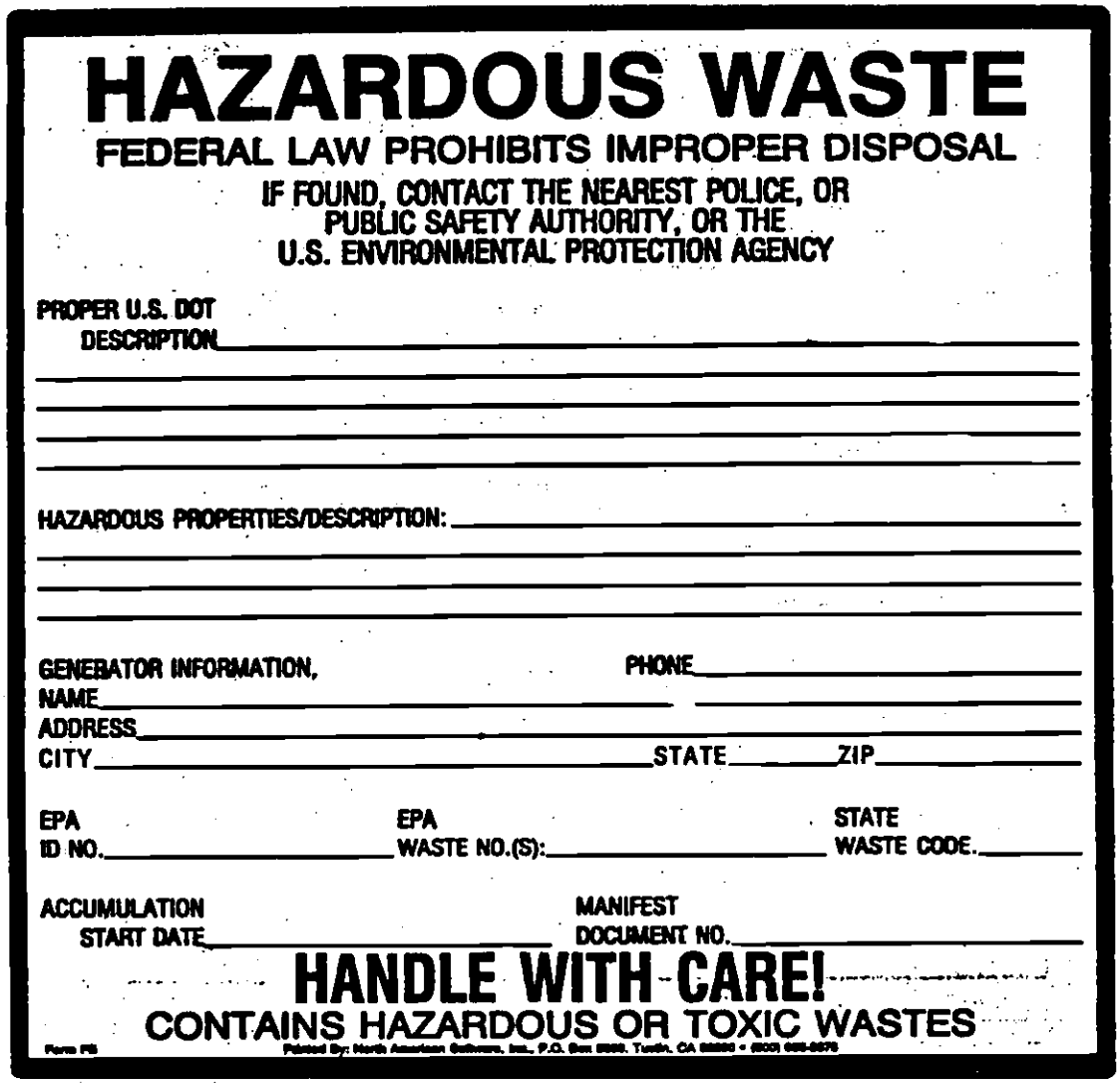

Figure 4.2 Hazardous Waste Label

4.3 STAGING AND TRANSPORT

Consistent with current activities, drums containing IDW will be moved to the drum staging area shown on Figure 3.1 per instructions from the AFCEE COR at NAS Fort Worth JRB. The drums will be stored on pallets managed in the staging area by NAS Fort Worth JRB pending disposal characterization. The pallets will be placed in parallel with access paths to allow unhindered entry to all containers. All drums will have enough room surrounding them for an observer to see any identification markings on the container or to place additional identification on them.

After chemical analytical data for containerized IDW is received (if required), a waste code request form will be submitted to TNRCC along with the facility-specific waste profile form. After the approved waste code and waste profile sheet is returned, they will be submitted to the TSDF. Once approval is received from the TSDF, the drums will be disposed of according to the following criteria:

- Containerized soil with the same waste code will be removed from drums and bulked in a roll-off box or dump truck for disposal. If free liquid is present in the drums, the liquid will be solidified by adding and mixing Portland Cement (or some other suitable agent) prior to placing it in the roll-off box. The box will be covered (e.g., tarpaulin) to prevent intrusion of rain water and to minimize dust.

- Containerized liquid waste with the same waste code will be removed from drums and bulked in a tank for disposal.

- Low volume waste requiring special transportation and disposal will be left in drums. Examples of this include RCRA hazardous waste and petroleum-contaminated waste.

It is anticipated that the time required for the disposal of any waste stored at the IDW Staging Area will not exceed 90 days from the period of generation.

4.4 DISPOSAL

The disposal options for IDW will be assessed on a waste-specific basis. The following disposal options will be utilized on an as-needed basis:

- Uncontaminated soil will be disposed either on base pending Air Force approval or in a Texas Class 2 landfill, depending on TNRCC direction.

- Contaminated soil that exceeds TNRCC action levels but is not RCRA hazardous will be disposed in a Texas Class 1 landfill.

- RCRA characteristically-hazardous soil will be disposed of in a RCRA Subtitle C landfill. Soil which is hazardous solely for organic characteristic will be incinerated prior to disposal. Soil which is hazardous solely for metals will be stabilized prior

to disposal. Soil which is hazardous for both organics and metals will be thermally treated and then stabilized.

- RCRA listed waste will be disposed of in a Subtitle C landfill if the constituents of concern are below the treatment standard. Listed waste which is above the treatment standard will be incinerated.

- Petroleum-contaminated waste classified as PST special waste will be disposed of at a landfill permitted to accept such waste. Waste classified as PST Class 2 will be disposed of in a Class 2 landfill.

Figure 3.2 identifies possible TSDFs for each category of waste. Once a disposal option has been determined following receipt of characterization data, and the appropriate authorities have concurred, a letter requesting authorization for disposal will be submitted to the AFCEE COR at NAS Fort Worth JRB. Included with the letter will be the waste profile sheet, the TNRCC Waste Code Approval Forms, and the corresponding data. Once the appropriate generator official has given authority for disposal and confirmed the disposal option, HydroGeoLogic will proceed with disposal activities.

If the material is to be disposed on base, the AFCEE COR at NAS Fort Worth JRB will designate a location within the installation boundary for disposal. HydroGeoLogic or its subcontractor will then move the IDW to that location. The contents of the containers will be placed on the ground or in an excavation pit, depending on the location. The empty containers will be taken to the drum storage area for reuse.

If the material is to be shipped off site, HydroGeoLogic will arrange for a transportation company for that disposal. HydroGeoLogic will complete the appropriate forms, perform any additional sampling, and arrange for treatment or disposal with the proper TSDF. Table 4.2 includes the names and EPA Identification Numbers for potential laboratories, transporters, and TSDFs that may receive NAS Fort Worth JRB IDW.

AFCEE is the generator and sole owner of all waste from the RFI investigation and is ultimately responsible for the fulfillment of any manifest and/or waste profile requirements associated with the storage, transportation and disposal of nonhazardous and hazardous waste. HydroGeoLogic will provide support to AFCEE in all aspects of the disposal process.

4.5 RECORD KEEPING

A binder of IDW-related records for all waste produced during RFI activities at NAS Fort Worth JRB will be maintained at HydroGeoLogic's Field Office in Fort Worth, Texas. The records maintained on-site will include active IDW Inventory Sheets (Table 4.1), as well as, photocopies of completed IDW Inventory Sheets, analytical data supporting disposal, correspondence with the Navy for on-base disposal activities, and manifests for waste disposed off-base. Field personnel will maintain IDW Inventory Sheets during ongoing RFI field investigations. Original records will be maintained at HydroGeoLogic headquarters.

Table 4.2
Potential Subcontractors and TSDFs
IDW Management Plan
NAS Fort Worth JRB, Texas

All CenTex P.O. Box 545 Cedar Park, TX 78630-0545 TNRCC number: 41746 EPA number: TXD988021556 512-259-4148 POC: Robert Negrete	ChemSOLVE 11629 Manchaca Road Austin, TX 78748 512-290-7680 POC: Mark Krause
American Ecology Petronila Road 4 miles south of Robstown, TX 78380 512-387-3518 EPA number: TXD069452340	Environmental Dynamics, Inc. EPA number: CAD 982513699 TNRCC number: 47038 210-521-9062 POC: Andrew Wallace
BFI 450 E. Cleveland Rd. Hutchins, TX 75141 POC: Shirley Lane	River City Steel & Recycling 5326 Roosevelt Avenue San Antonio, TX 78214 210-924-1254
BFI Sunset Farms Municipal Landfill Austin, TX 9912 Gilis Road Austin, TX 78757 TNRCC number: 1447 512-272-4327 POC: Wendy Funk	Western Waste Industries 100 1-45, Suite 210, LP Tower Conroe, TX 77301 POC: Irma Reyes 409-760-3685 DOT number: 405569 TNRCC number: 39001
Browning Ferris, Inc. (BFI) TNRCC number: 21751 512-272-4327 POC: Wendy Funk	Western Waste Industries 100 1-45, Suite 210, LP Tower Conroe, TX 77301 409-760-3685 EPA number: TXD988023248

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ATTACHMENT A

WASTE CLASSIFICATION CHECKLIST

Chapter 3

Waste Classification Checklist

This chapter provides a checklist to help you classify your hazardous waste and your nonhazardous industrial waste. For an overview of these types of waste, refer back to Figure 1 in Chapter 1; for more details, refer to 30 TAC Chapter 335 Subchapter R Sections 335.501–508. (You can obtain your own copy of state rules from the TNRCC publications unit; ways to contact this unit are listed under the heading "TNRCC and EPA Forms" in Chapter 6.)

Process Knowledge vs. Analytical Testing

In determining a waste stream's classification, a generator may use *process knowledge* and/or *analytical testing*. Process knowledge is the owner or operator's knowledge about how the facility operates, how a waste was produced and handled, and other information based on operating experience. Analytical testing is information about a waste from laboratory analysis.

In the checklist, the nonhazardous classification criteria that could involve analytical testing have been marked with an *. This marking **does not** mean that analytical testing is the only way to evaluate these criteria. If sufficient process knowledge is available, little or no analysis may need to be performed. You should evaluate whether you have enough process knowledge about the waste to classify it or whether analytical testing is needed.

Documentation

Regardless of whether you rely on process knowledge or opt for analytical testing, you must fully document the information used in making your waste classification. **A completed checklist does not qualify as full documentation.** Documentation should be in a written and/or electronically stored format that is reasonably accessible and easily reproducible. For details on documentation requirements, see Chapter 4.

Part I. Hazardous Waste Determination

All waste generators should work through Part I of this checklist. In this part you will determine whether your waste is hazardous because (a) it is listed as hazardous by EPA or (b) it displays characteristics that EPA says make it hazardous.

In federal regulatory language, the first step in classifying your waste is called "making a *hazardous waste determination.*" The definition of hazardous waste, based upon the Resource Conservation and Recovery Act (RCRA), is found in Title 40 of the Code of Federal Regulations (CFR), Part 261.

This TNRCC guidance document reflects the hazardous waste definition as of January 1, 1998. If that definition changes, the generator is still responsible for making an accurate hazardous waste determination in accordance with the latest regulations—instead of with what is printed in this guidance document.

IF the answer to any of the questions in Part I is "Yes,"
THEN the waste is hazardous.

Possible *Exclusions* from Hazardous Classification

Under certain conditions, some types of wastes are excluded from being considered hazardous (40 CFR Sections 261.3–4). Generators may wish to review these exclusions before working through Part I of this checklist.

Part I-A. *Listed* Hazardous Waste Determination

The EPA lists some 400 hazardous wastes.

Information to Help You Make This Determination

Descriptions of listed waste are found in 40 CFR Part 261, Subpart D, Sections 261.31–33. These wastes are often referred to as follows:

- "F" listed waste (waste from nonspecific sources, Section 261.31;
- "K" listed waste (wastes from specific sources, Section 261.32;
- "P" listed waste (unused acutely hazardous off-specification materials as well as container residues and spill residues of these materials, Section 261.33;
- "U" listed waste (unused toxic hazardous off-specification materials as well as container residues and spill residues of these materials, Section 261.33.

QUESTION: Is the waste a listed hazardous waste, or is it mixed with or derived from one? ❑ Yes ❑ No

Part I-B. *Characteristic* Hazardous Waste Determination

Wastes may be hazardous if they display any of four characteristics: ignitability, corrosiveness, reactivity, or toxicity.

Information to Help You Make This Determination

Ignitability

Wastes that are hazardous because they may ignite include the following:

- Liquid wastes (other than those aqueous waste containing less than 24 percent alcohol by volume) that have a flash point less than 60°C (140°F). (The test method is the Pensky-Martens closed cup tester, using the test method specified in ASTM Standard D-93-79 or D-93-80, or a Setaflash closed cup tester, using the test method specified in ASTM Standard D-3278-78.)
- Nonliquid wastes that, under standard temperature and pressure, are capable of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burn so vigorously and persistently that they create a hazard.
- Wastes that meet the definition of an ignitable compressed gas (see 49 CFR Section 173.300).
- Wastes that meet the definition of an oxidizer (see 49 CFR Section 173.151).

QUESTION: Is the waste ignitable according to 40 CFR Section 261.21? ❑ Yes ❑ No

Corrosiveness

Wastes that are hazardous because they are corrosive include the following:

- aqueous wastes with a pH of 2 units or below or of 12.5 units or above;
- liquid wastes that corrode steel at a rate greater than 6.35 mm (0.250 inches) per year.

QUESTION: Is the waste corrosive according to 40 CFR Section 261.22? ❑ Yes ❑ No

Reactivity

A waste is considered reactive if it meets any of the following conditions:

- It is capable of detonation or explosive decomposition or reaction
  - ▼ at standard temperature and pressure,
  - ▼ if subjected to a strong ignition source, or
  - ▼ if heated under confinement.
- When mixed with water, it is
  - ▼ potentially explosive,
  - ▼ reacts violently, or
  - ▼ generates toxic gases or vapors.
- If a cyanide or sulfide-bearing waste is exposed to pH conditions between 2 and 12.5, it can generate enough toxic gases, vapors, or fumes to present a danger to human health or the environment. Generally, if a waste generates **250** ppm or more of reactive cyanides or **500** ppm or more of reactive sulfides, it is considered a reactive waste. (It should be noted that these levels of reactive compounds are just guidance. Each waste must be evaluated for reactivity on a case-by-case basis).
- It is normally unstable and readily undergoes violent change without detonating.
- It is a forbidden explosive (as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53).
- It is a Class B explosive (see 49 CFR Section 173.88).

QUESTION: Is the waste reactive according to 40 CFR Section 261.23? ❑ Yes ❑ No

Toxicity

A waste is toxic if the toxicity characteristic leaching procedure (TCLP) shows that a representative sample from the waste contains one or more constituents at or above the levels listed in Table 3-1. The TCLP is described in EPA Method 1311 (SW-846).

QUESTION: Is the waste toxic according to CFR Section 261.24? ❑ Yes ❑ No

arsenic—5.0 mg/l	1,4-dichlorobenzene—7.5 mg/l	nitrobenzene—2.0 mg/l
barium—100.0 mg/l	1,2-dichloroethane—0.5 mg/l	pentachlorophenol—100.0 mg/l
benzene—0.5 mg/l	1,1-dichloroethylene—0.7 mg/l	pyridine—5.0 mg/l
cadmium—1.0 mg/l	2,4-dinitrotoluene—0.13 mg/l	selenium—1.0 mg/l
carbon tetrachloride—0.5 mg/l	endrin—0.02 mg/l	silver—5.0 mg/l
chlordane—0.03 mg/l	heptachlor (and its epoxide)—0.008 mg/l	tetrachloroethylene—0.7 mg/l
chlorobenzene—100.0 mg/l	hexachlorobenzene—0.13 mg/l	toxaphene—0.5 mg/l
chloroform—6.0 mg/l	hexachlorobutadiene—0.5 mg/l	trichloroethylene—0.5 mg/l
chromium—5.0 mg/l	hexachloroethane—3.0 mg/l	2,4,5-trichlorophenol—400.0 mg/l
o-cresol—200.0 mg/l	lead—5.0 mg/l	2,4,6-trichlorophenol—2.0 mg/l
m-cresol—200.0 mg/l	lindane—0.4 mg/l	2,4,5-TP (Silvex)—1.0 mg/l
p-cresol—200.0 mg/l	mercury—0.2 mg/l	vinyl chloride—0.2 mg/l
cresol—200.0 mg/l	methoxychlor—10.0 mg/l	
2,4-D—10.0 mg/l	methylethylketone—200.0 mg/l	

Review of Checklist Part I—Hazardous Waste

IF the answer to any of the preceding questions in Part I is "Yes,"
THEN the waste is HAZARDOUS; PROCEED to Chapter 4.

IF the answers are "No" to all the preceding questions,
AND the waste is NONINDUSTRIAL,
THEN STOP here.

IF the answers are "No" to all of the preceding questions,
AND the waste is INDUSTRIAL,
THEN PROCEED to Part II.

Part II: Nonhazardous Industrial Waste Classes 1 & 2

The determination in this part of the checklist applies only to nonhazardous industrial waste—see figure 1 in Chapter 1. (This part of the checklist is based on regulations found in 30 TAC Sections 335.505–06 and 335.508).

IF the answer to any of the **un-numbered** questions in this part of the checklist is "Yes,"
THEN the nonhazardous industrial waste is a Class 1 waste.

IF all the answers to the **un-numbered** questions in this part are "No,"
THEN the industrial waste is a Class 2 waste.

Generator's Self-Classification

QUESTION: Has the generator chosen to classify its nonhazardous waste as Class 1? ❑ Yes ❑ No

Container Waste

IF the waste is a container, greater than 5 gallons in holding capacity, which has held

- ▼ a hazardous substance (as defined in 40 CFR Part 302 and listed in Appendix A of this guidance document),
- ▼ a hazardous waste (including acutely hazardous wastes),
- ▼ a Class 1 waste, and/or
- ▼ a material that would be classified as a hazardous or Class 1 waste if disposed of,

THEN answer questions 1 and 2. (*Please note that containers that have held acutely hazardous wastes must be triple-rinsed before they can be classified as empty).*

IF these conditions are not present in your situation,
THEN proceed to the next un-numbered question.

1. Has the container had all its residues removed? ❑ Yes ❑ No
2. Has the container been rendered unusable? ❑ Yes ❑ No

QUESTION: Are any of the answers to questions (1) or (2) above "NO"? ❑ Yes ❑ No

Regulated Asbestos-Containing Material (RACM)

(See Chapter 8, Definition of Terms, for information on RACM.)

QUESTION: Does the waste contain asbestos material identified as RACM, as defined in 40 CFR Part 61? * ☐ Yes ☐ No

Polychlorinated Biphenyls (PCBs)

QUESTION: Is the waste contaminated by a material that originally contained 50 or more parts per million (ppm) total PCBs? * ☐ Yes ☐ No

QUESTION: Does the waste contain 50 or more ppm PCBs?* ☐ Yes ☐ No

Petroleum Substance Waste

1. Is your waste specifically identified as a *petroleum substance* (see Chapter 8, Definitions of Terms) or contaminated with a material identified as a petroleum substance waste? ☐ Yes ☐ No

2. Does the waste contain more than 1,500 ppm total petroleum hydrocarbons (TPH)? ☐ Yes ☐ No

QUESTION: Are the answers to **both** of the numbered questions above "Yes"? (If one or both of the answers are "No," enter "No" for this question.) ☐ Yes ☐ No

"New Chemical Substance"

See "new chemical substances wastes" in Chapter 8, Definitions and Terms, for a description of how this particular type of waste may be classified as Class 2 or 3.

QUESTION: Is the waste from the production of a "new chemical substance," as defined by the federal Toxic Substances Control Act, 15 U.S.C.A. Section 2602(9)? ☐ Yes ☐ No

Out-of-State Origin

See "wastes generated out-of-state" in Chapter 8, Definitions of Terms, for details on how this particular type of waste may be classified as Class 2 or 3.

QUESTION: Is the waste generated outside Texas? ☐ Yes ☐ No

Constituent Levels and Specified Properties for Nonhazardous Industrial Class 1 Wastes

QUESTION: If the waste is a liquid, does it have a flash point of less than 65.6°C (150°F)? * ☐ Yes ☐ No

QUESTION: Is the waste a solid or semi-solid that—under conditions normally encountered in storage, transportation, and disposal—

- is liable to cause fires through friction or through retained heat from manufacturing or processing; or
- can be ignited readily, and when ignited burns so vigorously and persistently as to create a serious hazard? ☐ Yes ☐ No

QUESTION: Is the waste a semi-solid or solid that, when mixed with an equivalent weight of ASTM Type II laboratory distilled or deionized water, produces a solution with a pH of 2 or less or 12.5 or more? ☐ Yes ☐ No
(***Exception:*** for solidified, stabilized, encapsulated, or otherwise chemically bound wastes, an exception is provided in 30 TAC Section 335.505(3)) *

QUESTION: Does the waste leach Class 1 toxic constituents at or above the levels listed in Table 1, Appendix 1 of 30 TAC Chapter 335 Subchapter R when submitted to the toxicity characteristic leaching procedure (TCLP)? * ☐ Yes ☐ No
(For a copy of Table 1, Appendix 1, see Appendix C of this guidance document.)

(Where matrix interferences of the waste cause the Practical Quantitation Limit (PQL) of the specific analysis to be greater than the Maximum Concentration listed in Table 1, Appendix 1 of 30 TAC Chapter 335 Subchapter R, then the achievable PQL becomes the Maximum Concentration, provided that the generator maintains documentation that satisfactorily demonstrate to the TNRCC that lower levels of quantitation of a sample are not possible.)

A satisfactory demonstration includes the results from the analysis of the waste for that specific constituent by a laboratory using an appropriate method found in *Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods* (EPA SW-846); *Methods or Chemical Analysis of Water and Wastes* (EPA-600 series); *Standard Methods for the Examination of Water and Wastewater*; *American Society for Testing and Materials (ASTM) Standard Methods*; or an equivalent method approved by the TNRCC.

Lack of Class 2 or 3 Information

QUESTION: Is information lacking that demonstrates the waste belongs in Class 2 or 3? ☐ Yes ☐ No

Review of Checklist Part II: Class 1 or 2 Nonhazardous Industrial Waste

IF	the answer to any of the preceding **un-numbered** questions in Part II is "Yes,"
THEN	the nonhazardous industrial waste is a Class 1 waste.
PROCEED	to Chapter 4.
IF	the answers are "No" to all the preceding **un-numbered** questions in Part II,
THEN	the industrial waste is a Class 2 waste.
PROCEED	to Chapter 4.
IF	the answers are "No" to all of the preceding **un-numbered** questions in Part II,
AND	the industrial generator wishes to evaluate the waste for a possible Class 3 status,
THEN PROCEED	to Part III.

Part III: Nonhazardous Industrial Class 3 Waste

This part of the checklist applies only to nonhazardous, industrial waste that does not meet the definition of a Class 1 waste and is not specifically identified as a Class 2 waste. (The corresponding regulations for this part of the checklist can be found in 30 TAC Sections 335.507 and 335.508.)

Part III-A. Initial Determinations for Class 3 Status

IF the answer to any of the following questions in Part III-A is "Yes,"
THEN the nonhazardous, industrial waste ***cannot*** be considered a Class 3 waste.

Containers

QUESTION: Is the waste an empty container? ❑ Yes ❑ No

Medical Waste

(For a definition, see "medical wastes" in Chapter 8.)
QUESTION: Is the waste a medical waste regulated under 30 TAC Chapter 330, Subchapter Y? ❑ Yes ❑ No

Distilled Water Leaching Test

QUESTION: When submitted to the 7-day distilled water leaching test, does the waste leach constituents at or above the maximum contaminant levels listed in Table 3, Appendix 1 of 30 TAC Chapter 335, Subchapter R? * ❑ Yes ❑ No
(Table 3 is reproduced in Appendix D of this guidance document.)

Toxicity Characteristic Leaching Procedure

QUESTION: When submitted to the toxicity characteristic leaching procedure (TCLP), does the waste leach Class 1 toxic constituents listed in Table 1, Appendix 1 of 30 TAC Chapter 335 Subchapter R at or above their detection levels? * ❑ Yes ❑ No
(The list of Class 1 toxic constituents is reproduced in Appendix E of this guidance document.)

Exclusion: Excluded from this list of Class 1 toxic constituents are those addressed in the previous question (that is, constituents identified in Table 3, Appendix 1 of 30 TAC Chapter 335 Subchapter R).

Petroleum Hydrocarbons

QUESTION: Does the waste contain detectable levels of petroleum hydrocarbons (Method 1005)? * ❑ Yes ❑ No

Polychlorinated Biphenyls (PCBs)

QUESTION: Does the waste contain detectable levels of PCBs? * ❑ Yes ❑ No

Decomposition

QUESTION: Is the waste readily decomposable? ❑ Yes ❑ No

Review of Checklist Part III-A: Class 3 Nonhazardous Industrial Waste

IF the answer to any of the preceding questions in Part III-A is "Yes,"
THEN the nonhazardous, industrial waste ***cannot*** be considered a Class 3 waste.

IF all the answers to the preceding questions in Part III-A are "No,"
THEN proceed to Part III-B to continue the waste's evaluation for possible Class 3 status.

Part III-B: Final Determinations for Class 3 Status

Inertness

QUESTION: Is the waste inert? (Inertness refers to chemical inactivity of an element, a compound, or a waste.) ❑ Yes ❑ No

Insolubility

QUESTION: Is the waste essentially insoluble? ❑ Yes ❑ No
(*Note*: wastes that contain liquids are *NOT* considered insoluble.)

Review of Checklist Part III

IF the answer to any question under Part III-B is "No,"
THEN the nonhazardous, industrial waste ***cannot*** be considered a Class 3 waste.

IF all the answers to the questions in Part III-A are "No,"
AND all the answers to the questions in Part III-B are "YES,"
THEN the nonhazardous industrial waste is a Class 3 waste.

Part IV. Variance from Waste Classification

The TNRCC may determine, on a case-by-case basis, the merits of a variance request for a specific nonhazardous classification. The burden of justifying the need for a variance is on the requestor. The requestor must submit information sufficient to clearly indicate the issues involved, the reason(s) for the request, and both the positive and negative impacts that may result from the granting of the variance. (The regulations corresponding to these types of variance requests can be found in 30 TAC Section 335.514, Variance from Waste Classification Provisions.)

* As a reminder, these characteristics need not necessarily be addressed by analytical testing. A generator may be able to address them through process knowledge. For more information on process knowledge, please see Chapter 4 of this guidance document.

ATTACHMENT B

ENVIRONMENTAL BASELINE SURVEY - TABLE F-1 - INDUSTRIAL OPERATIONS GENERATING HAZARDOUS WASTE AND PETROLEUM PRODUCTS

Table F-1. Hazardous Waste Generation
Page 1 of 7

Facility	Type of Waste Generated	Years Generated	Amount Generated[a]
1015	Floor finish	1990-1992	2 gallons/month
	Hydraulic fluid	1990-1992	1 gallon/month
	JP-4	1990-1992	20 gallons/month
	Aircraft soap	1990-1992	1 gallon/month
	Engine gas path cleaner	1990-1992	2 gallons/month
	7808, 1010 Oil	1990-1992	5 gallons/month
1027	Aircraft soap	1991, 1992	55 gallons/month
	PD-680	1991, 1992	325 gallons/month
1048	Methyl ethyl ketone rags	1990-1992	Unknown
	PD-680	1990-1992	Unknown
	Isopropyl alcohol	1990-1992	Unknown
	Engine oil	1990-1992	Unknown
	Hydraulic fluid	1990-1992	Unknown
1050	PD-680	1990-1992	55 gallons/month
	Hydraulic fluid	1990-1992	0.25 gallon/month
	Lube oil	1990-1992	Unknown
	Citrikleen	1990-1992	Unknown
	Nickel/cadmium batteries	1992	Unknown
	Spill residue	1992	Unknown
1055	Freon/dump fluid	1991	Unknown
	PD-680	1990	Unknown
	PD-680	1991	9.2 gallons/month
1059	Methyl ethyl ketone	1991	Unknown
	Media bead waste	1991	Unknown
	Paint waste	1991	Unknown
	Cleaning compound	1991	Unknown
	Paint stripper	1991	Unknown
	Water soluble oil	1991	Unknown
	Speedy Dry	1991	Unknown
	Sand blaster waste	1991	Unknown
1060	Paint	1990-1992	50 gallons/month
	Hydrofluoric acid	1990-1992	0.125 gallon/month

(a) Information on amount of waste generated was not available for all entries.

Table F-1. Hazardous Waste Generation
Page 2 of 7

Facility	Type of Waste Generated	Years Generated	Amount Generated
1060 (Continued)	Alodine	1990-1992	10 gallons/month
	Paint remover	1990-1992	3 gallons/month
	Aircraft soap	1990-1992	10 gallons/month
	Surface stripper	1990-1992	3 gallons/month
	Methyl ethyl ketone	1990-1992	20 gallons/month
	Hot tank stripper	1990-1992	53.3 gallons/month
	Media bead waste	1991	Unknown
	Water soluble oil	1991	Unknown
1140	Safety Kleen	1990-1992	433.3 gallons/month
	Motor oil	1990-1992	250 gallons/month
	PD-680	1990-1992	55 gallons/month
1189	Potassium ferro cyanide	1990, 1991	Unknown
	Perchloroethylene	1990, 1991	Unknown
	Methylene chloride	1990, 1991	Unknown
1191	Paint and thinners	1990-1992	10 gallons/month
	Engine oil	1990-1992	150 gallons/month
	Safety Kleen	1990-1992	41.7 gallons/month
	Transmission and hydraulic fluid	1990-1992	50 gallons/month
	Antifreeze	1990-1992	50 gallons/month
	Battery acid	1990-1992	25 gallons/month
	Automotive fuel	1990-1992	20 gallons/month
	7808 Synthetic oil	1990-1992	Unknown
1194	Antifreeze	1990-1992	5.8 gallons/month
	PD-680	1990-1992	4.6 gallons/month
	Transmission fluid	1990-1992	2 gallons/month
	JP-4	1990-1992	416.7 gallons/month
	Engine oil	1990-1992	20 gallons/month
	Safety Kleen	1990-1992	25 gallons/month
	Aircraft soap	1990-1992	10 gallons/month
1215	Miscellaneous items	1992	Unknown
1250	Miscellaneous items	1991	Unknown
1251	Miscellaneous items	1990, 1992	Unknown

Table F-1. Hazardous Waste Generation
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Facility	Type of Waste Generated	Years Generated	Amount Generated
1320	Antifreeze	1990-1992	13 gallons/month
	Gas and diesel	1990-1992	9 gallons/month
	Battery acid	1990-1992	30 gallons/month
	7808 oil	1990-1992	13 gallons/month
	PD-680	1990-1992	9 gallons/month
	Transmission fluid	1990-1992	Unknown
1410	JP-4	1990-1992	15 gallons/month
	PD-680	1990-1992	30 gallons/month
	7808 oil	1990-1992	27 gallons/month
	Multi-Sheen	1990-1992	5 gallons/month
	Carbon remover	1990-1992	10 gallons/month
	Hydraulic fluid	1990-1992	2 gallons/month
	Safety-Kleen	1990-1992	31.7 gallons/month
	SE-377C	1990-1992	25 gallons/month
	Finger print remover	1992	Unknown
	Calibrating fluid	Unknown	Unknown
1413	Carbon remover	1991	Unknown
	JP-4	1991	Unknown
	PD-680	1991	Unknown
	7808 synthetic oil	1991	Unknown
	Finger print remover	1991	Unknown
	Safety-Kleen	1991	Unknown
1414	Antifreeze	1990-1992	80 gallons/month
	Gas, diesel, JP-4	1990-1992	165 gallons/month
	Citrikleen	1990-1992	55 gallons/month
	PD-680	1990-1992	80 gallons/month
	Hydraulic fluid	1990-1992	55 gallons/month
	Motor and synthetic oil	1990-1992	150 gallons/month
	Stop bath	1990-1992	5 gallons/month
	Emulsifier	1990-1992	18.3 gallons/month
	Fixer	1990-1992	5 gallons/month
	Developer	1990-1992	23.3 gallons/month
	Dye penetrant	1990-1992	18.3 gallons/month
	Mercury batteries	1992	Unknown

Table F-1. Hazardous Waste Generation
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Facility	Type of Waste Generated	Years Generated	Amount Generated
1415	Diesel	1991	Unknown
	Motor gasoline	1991	Unknown
	Paint waste	1991	Unknown
	PD-680	1991	Unknown
	Hydraulic fluid	1991	Unknown
	Antifreeze	1991	Unknown
	JP-4	1991	Unknown
	7808 synthetic oil	1991	Unknown
	Engine oil	1991	Unknown
1418	PD-680	1991, 1992	9.2 gallons/month
1420	PD-680	1990-1992	20 gallons/month
	Methyl ethyl ketone	1990-1992	0.04 gallon/month
	Soap	1990-1992	10 gallons/month
	Thinner	1990-1992	1.25 gallons/month
	Brake and hydraulic fluid	1990-1992	20 gallons/month
	7576 synthetic oil	1992	Unknown
	Cutting fluid	1992	Unknown
	Naphtha	1992	Unknown
	Lead-based paint	1992	Unknown
1425	Antifreeze	1990-1992	10 gallons/month
	Engine oil	1990-1992	40 gallons/month
	Hydraulic and transmission fluid	1990-1992	15 gallons/month
	Safety Kleen	1990-1992	7 gallons/month
1435	Diesel	1992	Unknown
	Motor gasoline	1992	Unknown
	Paint waste	1992	Unknown
	PD-680	1992	Unknown
	Hydraulic fluid	1992	Unknown
	Antifreeze	1992	Unknown
	JP-4	1992	Unknown
	7808 synthetic oil	1992	Unknown
	Engine oil	1992	Unknown

Table F-1. Hazardous Waste Generation
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Facility	Type of Waste Generated	Years Generated	Amount Generated
1436	Hydraulic fluid	1991	Unknown
	PD-680	1991	Unknown
	7808 synthetic oil	1991	Unknown
	Cutting fluid	1991	Unknown
	Naphtha	1991	Unknown
	Methyl ethyl ketone	1991	Unknown
	Lead-based paint	1991	Unknown
	Brake fluid	1991	Unknown
1602	PD-680	1990-1992	Unknown
	JP-4	1990, 1991	Unknown
	Hydraulic fluid	1990, 1991	Unknown
	Oil	1992	Unknown
	Epoxy thinner	1992	Unknown
	Lacquer thinner	1992	Unknown
	Methyl ethyl ketone	1992	Unknown
	Epoxy stripper	1992	Unknown
1615	Reverse bath	1990-1992	106.7 gallons/month
	Conditioner	1990-1992	106.7 gallons/month
	Fixer	1990-1992	106.7 gallons/month
	Bleach	1990-1992	106.7 gallons/month
	Stabilizer	1990-1992	106.7 gallons/month
	First developer	1990-1992	106.7 gallons/month
	Color developer	1990-1992	106.7 gallons/month
1617	Sodium persulfate etchant	1990-1992	4.6 gallons/month
	Solid paint waste, flammable	1990-1992	8.3 gallons/month
	Combustible gas (aerosol)	1990-1992	2.1 gallons/month
	DFD 12G developer	1990-1992	2.1 gallons/month
	Waste paint and thinners	1990-1992	12.5 gallons/month
1618	Sodium persulfate	1991	Unknown
	Solid paint waste	1991	Unknown

Table F-1. Hazardous Waste Generation
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Facility	Type of Waste Generated	Years Generated	Amount Generated
1618 (Continued)	Combustible gas	1991	Unknown
	DFD 12G developer	1991	Unknown
1628	Mean Green soap	1990-1992	55 gallons/month
	Battery acid	1990-1992	6 gallons/month
	Engine oil	1990-1992	55 gallons/month
	Methyl ethyl ketone	1990-1992	1 gallon/month
	PD-680	1990-1992	80 gallons/month
	Synthetic oil	1990-1992	41.7 gallons/month
	Antifreeze	1990-1992	5 gallons/month
	Hydraulic, transmission, and brake fluid	1990-1992	10 gallons/month
	Paint remover	1990-1992	9.2 gallons/month
	Paint and thinners	1990-1992	10 gallons/month
1643	Paint remover	1990-1992	8.3 gallons/month
	PD-680	1990-1992	98.3 gallons/month
	Mean Green soap	1990-1992	1 gallon/month
	Carbon remover	1990-1992	0.7 gallon/month
	JP-4	1990-1992	50 gallons/month
	Hydraulic fluid	1990-1992	16 gallons/month
	7808 synthetic oil	1991	Unknown
	Nickel/cadmium batteries	1992	Unknown
	Methyl ethyl ketone	Unknown	Unknown
	Poly thinner	Unknown	Unknown
3367	Paint waste	1991	Unknown
	Phosphoric acid	1991	Unknown
3369	Paint waste	1990	Unknown
	Phosphoric acid	1990	Unknown
4210	Alodine	1990, 1992	Unknown
	Methyl ethyl ketone	1990, 1992	Unknown
	Toluene	1990, 1992	Unknown
	Freon	1990, 1992	Unknown
	Hydraulic fluid	1990, 1992	Unknown
4213	Alodine	1991	Unknown
	Methyl ethyl ketone	1991	Unknown
	Toluene	1991	Unknown

Table F-1. Hazardous Waste Generation
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Facility	Type of Waste Generated	Years Generated	Amount Generated
	Freon	1991	Unknown
	Hydraulic fluid	1991	Unknown
4214	Paint waste	1991	Unknown
4215	Paint waste	1990	Unknown
8503	Paint waste	1990	Unknown
8512	Paint waste	1991	Unknown

ATTACHMENT C

TNRCC HAZARDOUS OR INDUSTRIAL WASTE STREAM NOTIFICATION FORM

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TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

ONE-TIME SHIPMENT REQUEST FOR TEXAS WASTE CODE FOR SHIPMENT OF CLASS 1, 2, 3 AND EPA HAZARDOUS WASTE

Pursuant to the generator notification requirements of 30 TAC Section 335.6, the generator of a solid waste is required to submit to the TNRCC detailed written information pertaining to the composition and characteristics of the waste. Please complete all applicable sections. Incomplete forms will delay processing. Assigned waste codes cannot be changed without prior approval from the TNRCC.

Please type or print legibly:

GENERATOR CONTACT PERSON
GENERATOR COMPANY NAME
GENERATOR MAILING ADDRESS
CITY, STATE, ZIP CODE
PHONE NO. ( ) -
FAX NO. ( ) -

COMPLETE ONLY IF NOT REGISTERED

Are you industrial? ☐ Yes ☐ No

If industrial, have you submitted TNRCC Initial Notification form (TNRCC-0002)? ☐ Yes ☐ No

Date submitted: _____

COMPLETE ONLY IF REGISTERED

Solid Waste Registration No.

U. S. EPA Identification No.

Generating Site Location (☐ Check if same as above) _____
(STREET ADDRESS OR PHYSICAL DESCRIPTION)

Designated Treatment, Storage, and/or Disposal Facility Name and Address _____

DESCRIPTION OF WASTE
(do not use DOT description or trade name)

1. _____
2. _____
3. _____
4. _____

TNRCC USE ONLY

For TNRCC Assignment of Texas Waste Code Number

TEXAS WASTE CODES

① FORM CODE	② CLASS CODE	③ EPA CODE	④ ORIGIN CODE

PROCESSED DATE:

PROCESSED BY:

TNRCC REGION: **OFFICE**

GENERATOR/REPRESENTATIVE

I certify that the above information is correct to the best of my knowledge.

I, _____ *, am employed by:*
(NAME. Please Print)

(COMPANY NAME AND MAILING ADDRESS)

I am authorized to sign this certification for:

_____
(COMPANY NAME)

_____
(SIGNATURE)

_____
(DATE)

( )
(PHONE NUMBER)

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INSTRUCTIONS FOR TNRCC FORM 0757

Nonindustrial nonhazardous generators should not use this form

This form may NOT be used to add a waste to a Texas generator's registration.

You may mail or fax the form to us. If a fax is sent, no hard copy is required.

Mail to: Waste Report Audit Team - MC 129, Waste Evaluation Section, I & HW, TNRCC, P.O. Box 13087, Austin, Texas 78711-3087, phone: (512) 239-6832, fax: (512) 239-0786.

FORM CODES (Column #1): Form Codes are published in the Initial Notification Packet and in the *Texas Register*, dated November 13, 1992, Volume 17, and may be obtained by calling (512) 239-0028. Ask for document #RG-22.

CLASS CODES (Column #2): Please make a hazardous waste determination by using:

"H" for hazardous

"1" for Class 1 nonhazardous

"2" for Class 2 nonhazardous

"3" for Class 3 nonhazardous

EPA HAZARDOUS WASTE NO. (EPA CODES) (Column #3): Please reference 40 CFR Part 261, Subpart C. If the waste is nonhazardous, please leave blank.

ORIGIN CODES (Column #4): Please review the origin codes below and select the code that best indicates the process or type of activity that generated this waste stream.

Code #

1 – Generated on-site from a product process or service activity.

2 – Spill clean-up, equipment decommissioning, or emergency removal by company.

3 – Derived from the on-site management of a nonhazardous waste.

4 – Waste received from off-site and not recycled or treated on-site.

5 – Residual from on-site treatment, disposal or recycling of hazardous waste.

6 – State, federal or locally funded cleanup.

7 – Corrective action or closure

Reasons for expediting one-time shipment (OTS) forms:

(all reasons must be submitted in writing with this form)

- Endangerment to human health or the environment
- Under a governmental order (i.e., Federal, State, County, etc.); copy of the order is required
- Financial duress: If results are not received within a specific time, the company will suffer temporary/ permanent close of business, bankruptcy, layoff of personnel, etc.

If you have any questions, please call (512) 239-6832.

* Conditionally Exempt Small Quantity Generator (CESQG): A non-industrial generator who generates no more than 100 kilograms (26½ gal or 220 pounds) of hazardous waste and no more than 1 kilogram (about 1 quart) of acutely hazardous waste in any calendar month (30 TAC 335.78). These generators are not regulated by TNRCC. The following codes should be assigned:

Solid waste registration number - CESQG EPA ID number - TXCESQG Sequence number - CESQ + form code + class code

FINAL PAGE

ADMINISTRATIVE RECORD

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